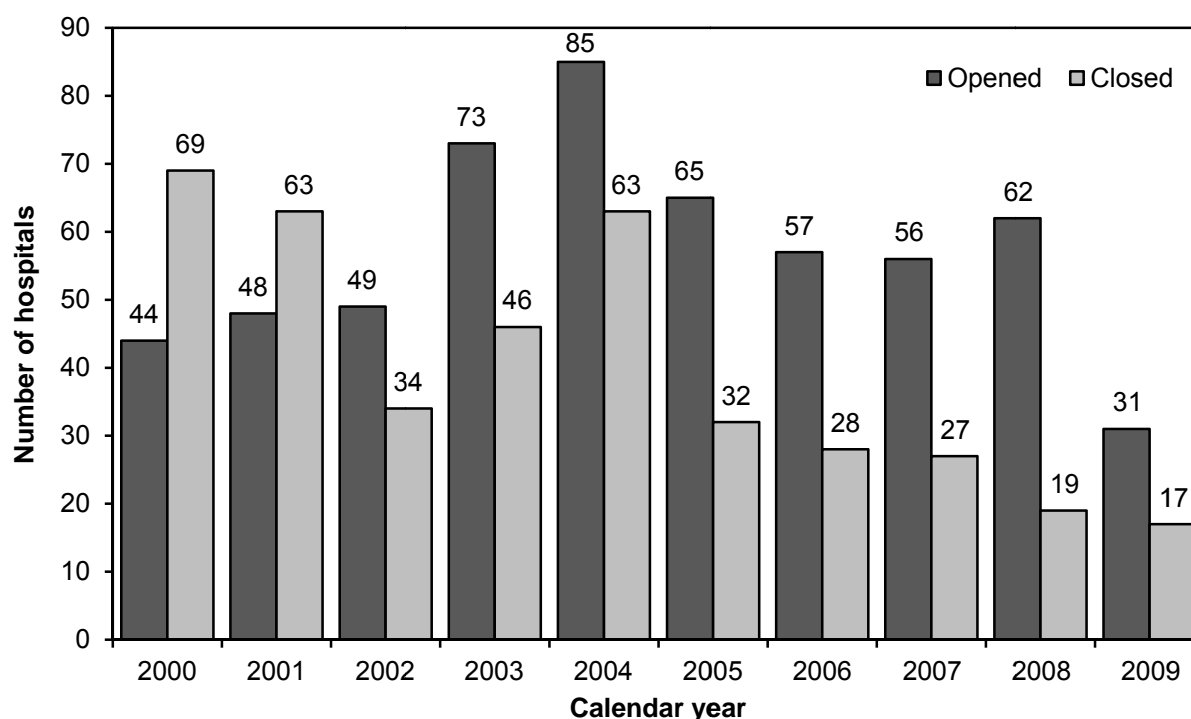


SECTION

6

Acute inpatient services
Short-term hospitals
Specialty psychiatric facilities

Chart 6-1. Annual changes in number of acute care hospitals participating in the Medicare program, 2000–2009



Note: Openings and closures exclude hospitals converting to long-term care hospitals and critical access hospitals. Closures include voluntary and involuntary terminations.

Source: MedPAC analysis of the Provider of Service file from CMS.

- The number of hospital openings exceeded the number of closures for the seventh consecutive year. In 2009, 31 acute care hospitals began participating in the Medicare program and 17 terminated.
- Overall, the number of acute care hospitals increased from 2008 to 2009. In 2009, 4,846 acute care hospitals (including critical access hospitals) participated in Medicare.

Chart 6-2. Percent change in hospital employment, by occupation, 2007–2009

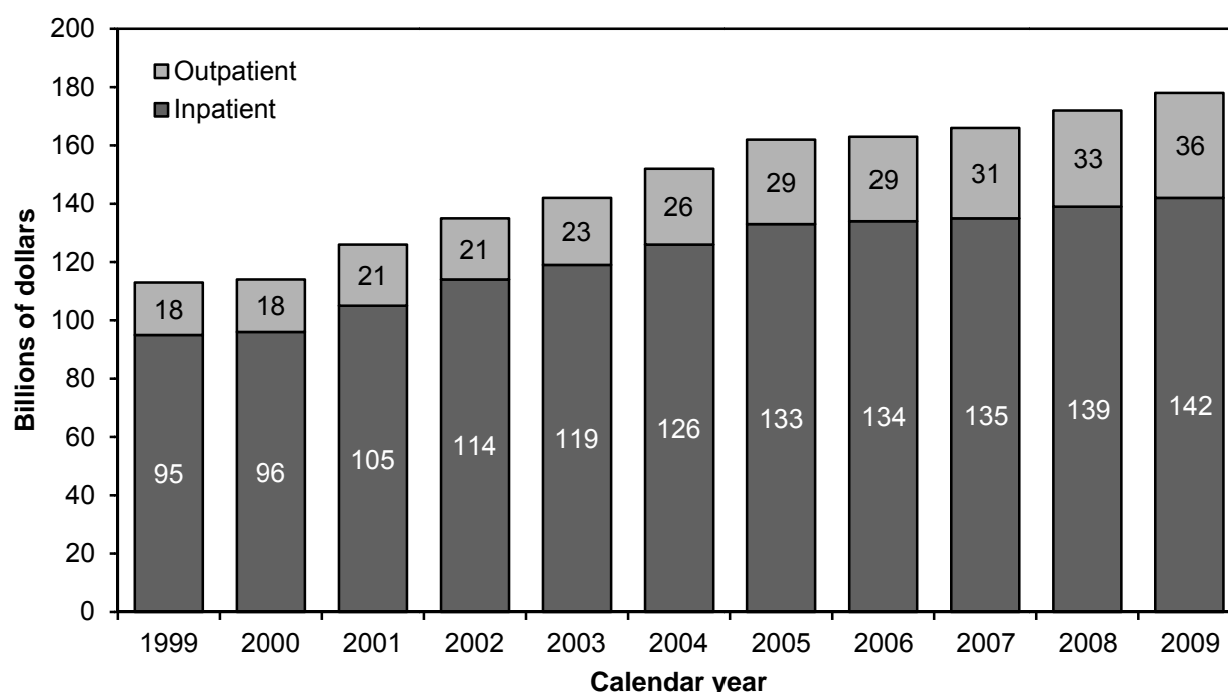
	Total U.S. employment (May 2007)	Total U.S. employment (May 2009)	Percent change in total employment (2007–2009)
All hospital occupations	4,973,020	5,174,240	4.1%
Diagnostic sonographer	27,450	30,490	11.1
Computer and math science	50,060	55,180	10.2
Management	168,070	182,870	8.8
Pharmacist	52,720	57,230	8.6
Business and finance	87,870	95,250	8.4
Social work	94,550	102,230	8.1
Radiology technician	120,050	127,820	6.5
Registered nurse	1,409,220	1,492,000	5.9
Nuclear medical technician	13,240	13,970	5.5
Support	633,920	646,110	1.9
Office or administrative	747,960	759,580	1.6
LPN or LVN	166,930	158,390	–5.2

Note: LPN (licensed practical nurse), LVN (licensed vocational nurse).

Source: MedPAC analysis of Bureau of Labor Statistics, Occupational Employment Statistics data set as of December 2010.

- In general, changes reported here continue trends we observed last year.
- From May 2007 to May 2009, hospital employment increased 4.1 percent. By the end of this period the hospital industry employed more than 5 million individuals.
- The number of diagnostic sonographers employed by the hospital industry increased more rapidly than any other occupation from 2007 to 2009, at 11.1 percent. Growth was also above average for other imaging-related occupations, such as radiology technicians (6.5 percent).
- The number of computer and math science staff at hospitals increased rapidly from May 2007 to May 2009, at 10.2 percent. Growth of this occupation may be related to the surge in interest in installing electronic health record systems in hospitals.
- Licensed practical nurses (LPNs) and licensed vocational nurses (LVNs) were among the few occupations to experience a decline in the number of individuals employed by hospitals from 2007 to 2009, declining by 5.2 percent (8,540 LPNs and LVNs). During the same time period, the number of registered nurses employed by hospitals increased 5.9 percent (82,780 registered nurses), suggesting a shift toward nurses with a higher level of training.

Chart 6-3. Growth in Medicare's FFS payments for hospital inpatient and outpatient services, 1999–2009



Note: FFS (fee-for-service). Analysis includes inpatient services covered by the acute inpatient prospective payment system (PPS); psychiatric, rehabilitation, long-term care, cancer, and children's hospitals and units; outpatient services covered by the outpatient PPS; and other outpatient services. Payments include program outlays and beneficiary cost sharing. The growth in spending was slowed in 2006 by large increases in the number of Medicare Advantage enrollees, who are not included in these aggregate totals.

Source: CMS, Office of the Actuary.

- Aggregate Medicare fee-for-service (FFS) inpatient spending was \$142 billion and outpatient spending was \$36 billion in 2009. From 2008 to 2009, inpatient spending increased about 2 percent, while outpatient spending increased about 10 percent.
- A freeze in inpatient payment rates in the Balanced Budget Act of 1997 reduced inpatient spending growth from 1999 to 2000. Spending increased substantially between 2001 and 2004 but reverted to relatively slow growth from 2005 to 2007 because a large number of beneficiaries switched from traditional FFS Medicare to the Medicare Advantage program. More rapid payment growth resumed in 2008 for inpatient and outpatient services.
- Outpatient spending has increased as a share of total hospital-based spending in the last 10 years. In 1999, outpatient spending accounted for almost 16 percent of all hospital spending; in 2009, outpatient spending grew to more than 20 percent of total hospital spending.
- Outpatient spending per FFS beneficiary was about \$1,133 in 2009, up from approximately \$590 in 1999, a 93 percent increase.

Chart 6-4. Proportion of Medicare acute care hospital inpatient discharges by hospital group, 2009

Hospital group	Hospitals		Medicare discharges	
	Number	Share of total	Number (thousands)	Share of total
All PPS hospitals and CAHs	4,660	100.0%	10,781	100.0%
PPS hospitals	3,370	72.3	10,373	96.2
Urban	2,402	51.6	8,896	82.5
Large urban	1,310	28.1	4,877	45.2
Other urban	1,092	23.4	4,020	37.3
Rural (excluding CAHs)	968	20.8	1,477	13.7
Rural referral	124	2.7	386	3.6
Sole community	394	8.5	602	5.6
Medicare dependent	195	4.2	216	2.0
Other rural <50 beds	102	2.2	47	0.4
Other rural ≥50 beds	153	3.3	226	2.1
Voluntary	1,969	42.3	7,442	69.0
Proprietary	824	17.7	1,637	15.2
Government	577	12.4	1,294	12.0
Major teaching	269	5.8	1,572	14.6
Other teaching	762	16.4	3,732	34.6
Nonteaching	2,339	50.2	5,070	47.0
CAHs	1,290	27.7	408	3.8

Note: PPS (prospective payment system), CAH (critical access hospital). Analysis includes all hospitals covered by Medicare's inpatient PPS along with CAHs. Maryland hospitals are excluded. Large urban areas have populations of more than 1 million. Major teaching hospitals are defined by a ratio of interns and residents to beds of at least 0.25. Other teaching hospitals have a ratio below 0.25. Data are limited to providers with complete cost reports in the CMS database. See Chart 6-24 for more information about CAHs. Numbers may not sum to totals due to rounding. Sample of hospitals limited to those with complete hospital cost reports in 2009.

Source: MedPAC analysis of PPS impact files and Medicare cost report data from CMS.

- In 2009, 3,370 hospitals provided 10.4 million discharges under Medicare's acute inpatient prospective payment system (IPPS) and 1,290 critical access hospitals (CAHs) provided more than 0.4 million discharges. The number of PPS discharges declined from 2008 primarily due to a shift in services from the inpatient to the outpatient setting.
- Approximately 15 percent of all hospitals are covered by three special payment provisions (rural referral centers, sole community hospitals (SCHs), and small rural Medicare-dependent hospitals (MDHs)) intended to help rural facilities that are not CAHs; these facilities account for more than 11 percent of all discharges. The number of these hospitals increased approximately 1 percent from 2008 to 2009.
- About 88 percent of rural hospitals were CAHs, SCHs, MDHs, or rural referral centers in 2009. Collectively, these four types of hospitals provide 86 percent of all rural discharges.

Chart 6-5. Major diagnostic categories with highest volume, fiscal year 2009

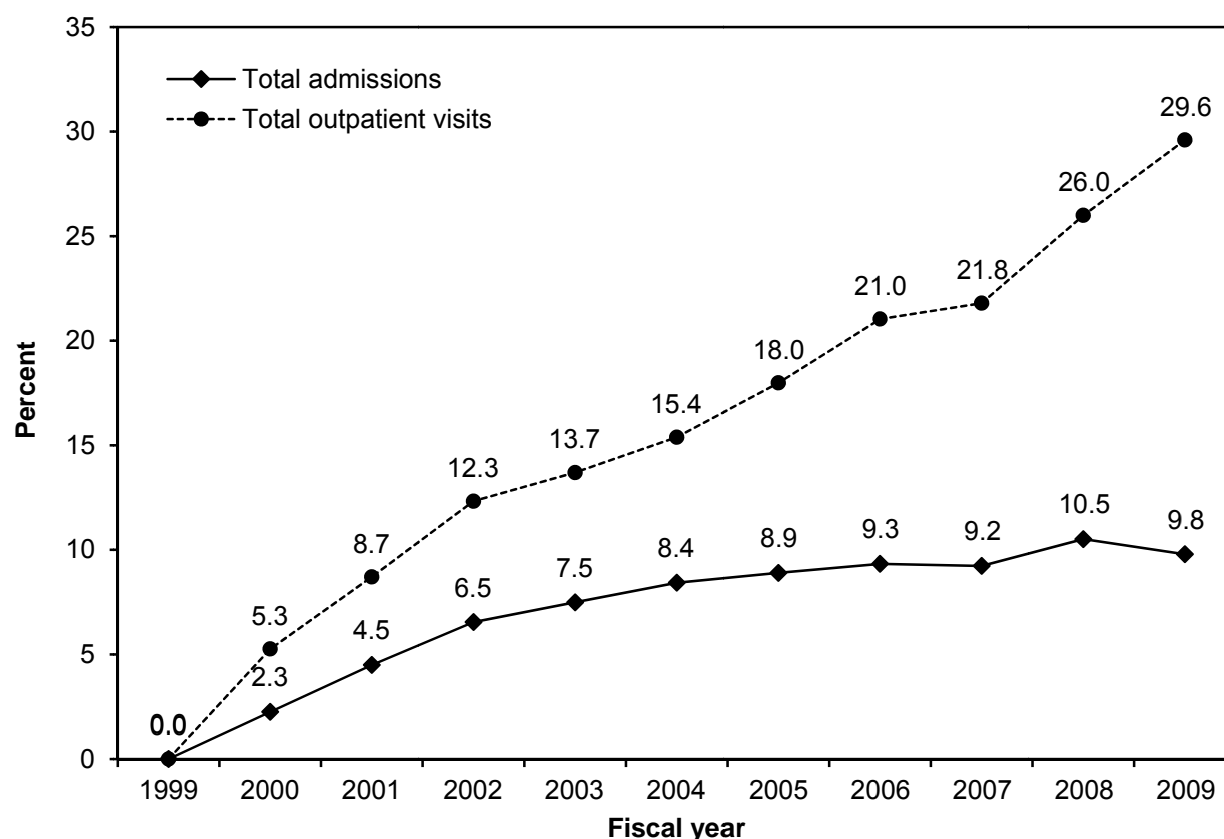
MDC number	MDC name	Share of all discharges	Share of medical discharges	Share of surgical discharges
5	Circulatory system	25%	23%	27%
4	Respiratory system	14	19	3
8	Musculoskeletal system and connective tissue	12	4	34
6	Digestive system	11	11	10
1	Nervous system	8	9	5
11	Kidney and urinary tract	7	8	4
18	Infectious and parasitic diseases	5	6	2
10	Endocrine, nutritional, and metabolic diseases and disorders	4	5	2
7	Hepatobiliary system and pancreas	3	2	4
9	Skin, subcutaneous tissue, and breast	3	3	2
	Total	92	91	93

Note: MDC (major diagnostic category). Numbers may not sum to totals due to rounding.

Source: MedPAC analysis of MedPAR data from CMS.

- In fiscal year 2009, 10 major diagnostic categories accounted for 92 percent of all discharges at hospitals paid under the acute inpatient prospective payment system.
- Circulatory system cases accounted for about one-quarter of medical cases and almost 30 percent of surgical cases.
- Respiratory system cases accounted for nearly 20 percent of medical discharges.
- Musculoskeletal system cases accounted for 34 percent of surgical discharges.

Chart 6-6. Cumulative change in total admissions and total outpatient visits, 1999–2009

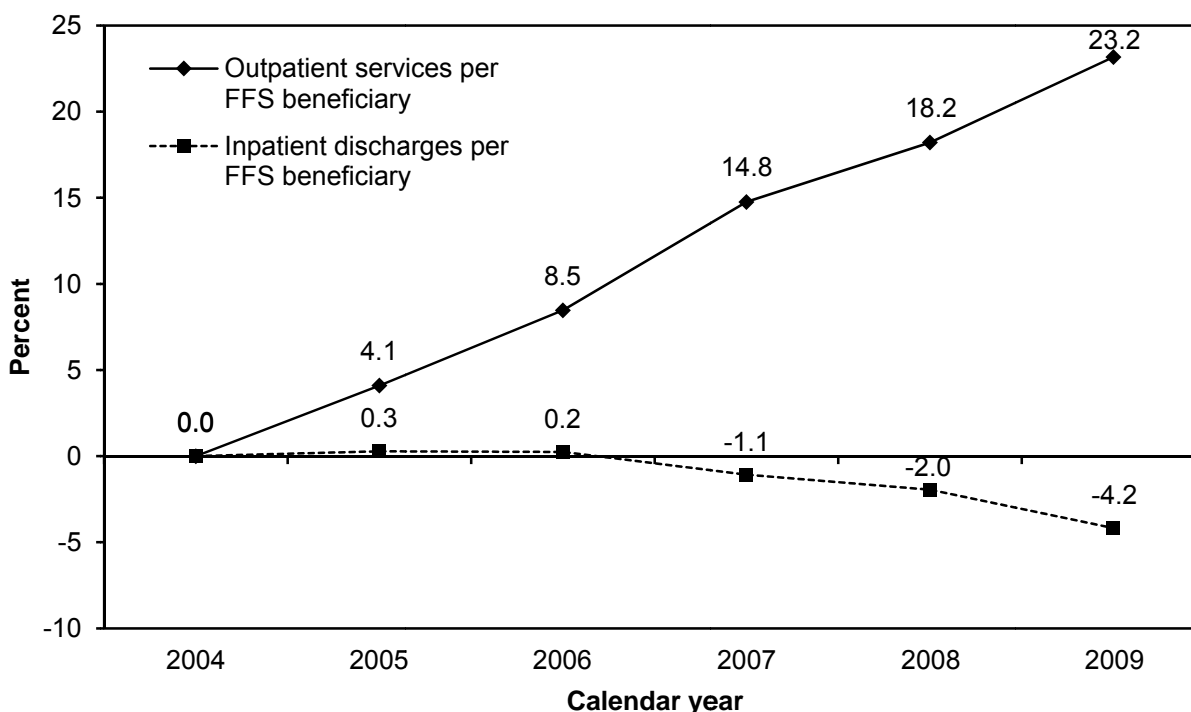


Note: Cumulative change is the total percent increase from 1999 through 2009. Data are admissions (all payers) to and outpatient visits at about 5,000 community hospitals.

Source: American Hospital Association, AHA Hospital Statistics.

- Hospital outpatient service use grew much more rapidly from 1999 to 2009 than inpatient service use. Total hospital outpatient visits increased about 30 percent from 1999 to 2009, while total admissions grew nearly 10 percent.
- There were 641 million outpatient visits and nearly 36 million admissions to community hospitals in 2009.
- The cumulative percent change in total outpatient visits increased by nearly 4 percentage points from 2008 to 2009, or nearly 18 million visits.
- The cumulative percent change in inpatient admissions decreased by 0.7 percentage point from 2008 to 2009, or more than 230,000 admissions. It was the largest single-year decrease in the last 10 years. Inpatient admission declined only slightly from 2006 to 2007.

Chart 6-7. Cumulative change in Medicare outpatient services and inpatient discharges per FFS beneficiary, 2004–2009

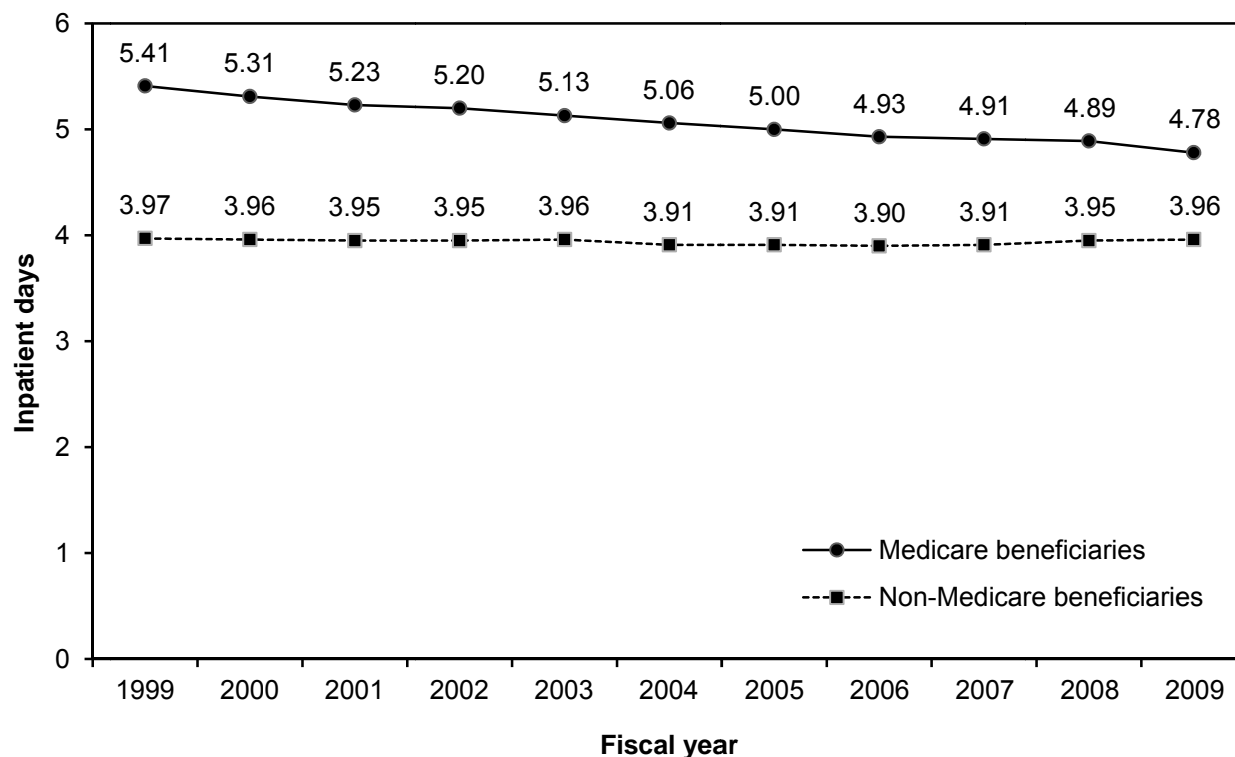


Note: FFS (fee-for-service). Data are for short-term general and surgical hospitals, including critical access and children's hospitals.

Source: MedPAC analysis of MedPAR and hospital outpatient claims data from CMS.

- From 2004 to 2009, the number of Medicare inpatient discharges per fee-for-service (FFS) beneficiary declined 4.2 percent. From 2004 to 2006, inpatient volume per beneficiary was relatively flat, but beginning in 2007, the volume of discharges began to decline.
- From 2004 to 2009, the number of outpatient services per FFS beneficiary increased more than 23 percent.
- Together these two trends suggest a shift in services from the inpatient to the outpatient setting.

Chart 6-8. Trends in Medicare inpatient and non-Medicare inpatient length of stay, 1999–2009

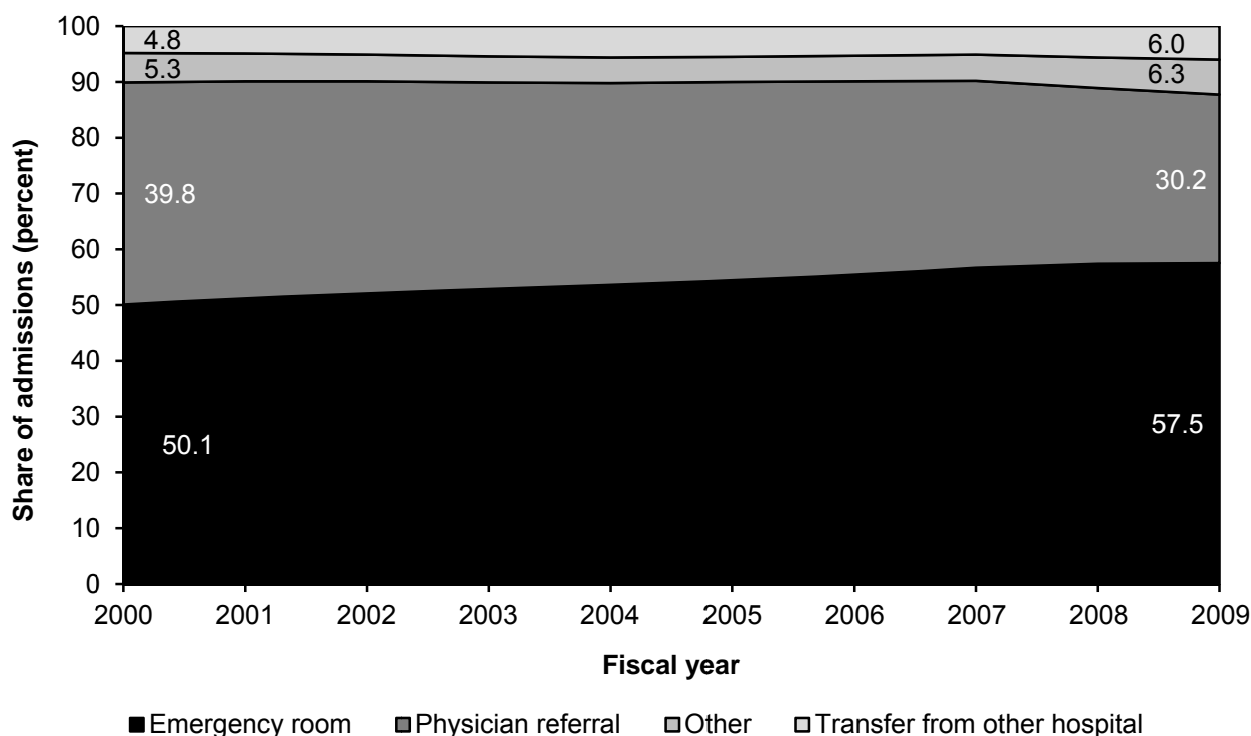


Note: Length of stay is calculated from discharges and patient days for more than 3,000 hospitals covered by the acute inpatient prospective payment system. Excludes critical access hospitals.

Source: MedPAC analysis of Medicare cost report data from CMS.

- Length of stay for Medicare inpatients was nearly 1 day longer than for non-Medicare inpatients in 2009.
- Length of stay for Medicare inpatients fell nearly 12 percent, from 5.41 days in 1999 to 4.78 days in 2009, dropping at an average annual rate of 1.2 percent from 1999 to 2009.
- Length of stay for all non-Medicare inpatients remained nearly unchanged at 3.96 days between 1999 and 2009.

Chart 6-9. Source of inpatient hospital admissions, 2000–2009

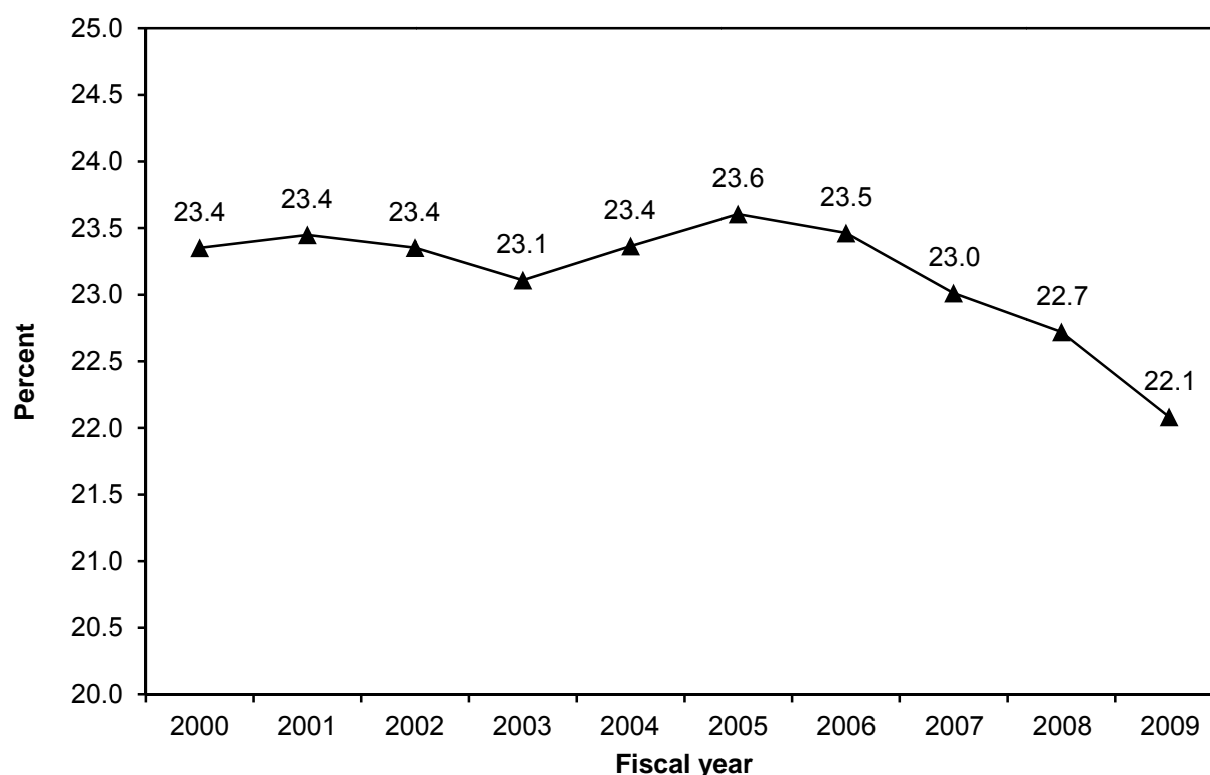


Note: "Other" includes clinic referral, health maintenance organization, transfer from skilled nursing facility, transfer from other provider, transfer from within the same hospital, court/legal, and no information.

Source: MedPAC analysis of MedPAR data from CMS.

- Hospitals report that most Medicare beneficiaries they admit as inpatients are admitted through hospital emergency rooms or directly from a referring physician. In 2009, nearly 58 percent of hospitalized patients were admitted through the emergency room and 30 percent through a physician. Note that not all emergency room admissions are emergency situations.
- The share of Medicare beneficiaries admitted to the hospital through the emergency room increased from approximately 50 percent to 58 percent from 2000 to 2009, nearly a 15 percent increase.
- The share of Medicare beneficiaries admitted to the hospital through a referring physician declined from approximately 40 percent to 30 percent from 2000 to 2009, a 24 percent decrease.
- Despite accounting for a relatively smaller share of all admissions, the share of Medicare beneficiaries admitted as transfers from other acute care hospitals increased from 4.8 percent to 6 percent, a 25 percent increase.
- On a per beneficiary basis, admissions through the emergency room increased from approximately 184 per 1,000 beneficiaries in 2000 to 205 per 1,000 beneficiaries in 2009, an 11.4 percent increase. In contrast, admissions from direct physician referral declined from 147 per 1,000 beneficiaries in 2000 to 108 per 1,000 beneficiaries in 2009, a 26.5 percent decline. In addition, admissions resulting from a transfer from another hospital increased from approximately 18 per 1,000 beneficiaries in 2000 to 21 per 1,000 beneficiaries in 2009, a 20.3 percent increase.

Chart 6-10. Share of Medicare Part A beneficiaries with at least one hospitalization, 2000–2009

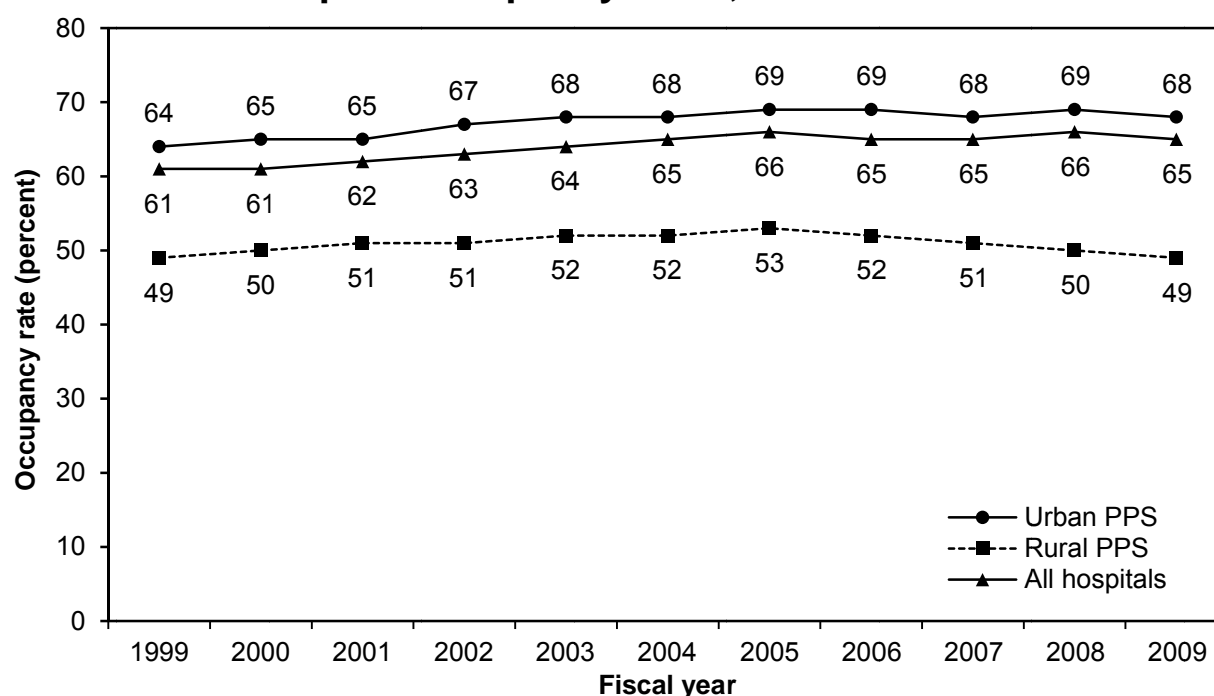


Note: Analysis excludes Medicare Advantage claims and claims for non-inpatient prospective payment system hospitals, such as critical access hospitals and hospitals located in Maryland.

Source: MedPAC analysis of MedPAR data from CMS.

- The share of Medicare beneficiaries with Part A coverage who had at least one inpatient hospitalization in a given year declined by 1.5 percentage points from 2005 to 2009. In 2009, approximately 22 percent of Medicare beneficiaries had at least one inpatient stay covered under Part A.
- Since 2005, the decline in the share of Medicare Part A beneficiaries using inpatient hospital care may be in part attributable to the rapid shift of surgical cases from the inpatient setting to the outpatient setting. In the inpatient setting, the number of surgical cases per beneficiary declined more rapidly than medical cases from 2005 to 2009, at 9.3 percent and 3.8 percent, respectively.

Chart 6-11. Hospital occupancy rates, 1999–2009



Note: PPS (prospective payment system). Hospital occupancy rate is measured as total inpatient days as a percent of total available bed days in the hospital over the reporting period. Bed days available are based on beds that are set up and staffed for inpatient service (i.e., the units are open and operating), but the beds may not be staffed for a full patient load in each unit on a given day. Hospitals' group designations for the entire 1999–2009 period are based on their status at the end of 2009.

Source: MedPAC analysis of data from the American Hospital Association Annual Survey of Hospitals.

- In the aggregate, hospitals' occupancy rates have been relatively stable at around 65 percent or 66 percent each year from 2004 to 2009. In 2009, occupancy rates were 65 percent. Earlier in the decade, hospital occupancy rates hovered around the low 60s.
- Occupancy rates are higher in urban than in rural hospitals; in 2009, occupancy rates stood at 68 percent for urban hospitals and 49 percent for rural hospitals, a 19 percentage point difference.
- Occupancy rates may understate overall facility occupancy levels because they do not include outpatient observation cases, which are often placed in beds counted as inpatient bed space.

Chart 6-12. Medicare inpatient payments, by source and hospital group, 2009

Hospital group	Percent of total payments					Total payments (millions)
	Base	IME	DSH	Outlier	Additional rural hospital*	
All hospitals	81.1%	5.0%	9.4%	3.6%	1.0%	\$110,019
Urban	80.5	5.5	9.8	3.9	0.3	98,622
Rural	85.7	0.7	5.4	1.2	7.0	11,396
Large urban	78.8	6.6	10.3	4.2	0.1	57,018
Other urban	82.8	3.9	9.2	3.5	0.7	41,604
Rural referral	89.1	1.1	7.9	2.0	0.0	3,173
Sole community	81.9	0.9	2.5	0.6	14.2	5,039
Medicare dependent	85.2	0.0	7.8	1.1	5.9	1,420
Other rural <50 beds	91.5	0.2	7.3	1.1	0.0	262
Other rural ≥50 beds	90.6	0.4	7.0	2.0	0.0	1,501
Voluntary	81.6	5.3	8.5	3.6	1.0	80,072
Proprietary	84.3	1.3	11.1	2.9	0.5	15,418
Government	74.6	7.0	12.5	4.3	1.6	14,528
Major teaching	66.3	16.1	12.2	5.3	0.1	24,756
Other teaching	83.0	3.7	9.3	3.4	0.6	40,191
Nonteaching	87.4	0.0	7.9	2.8	1.9	45,072

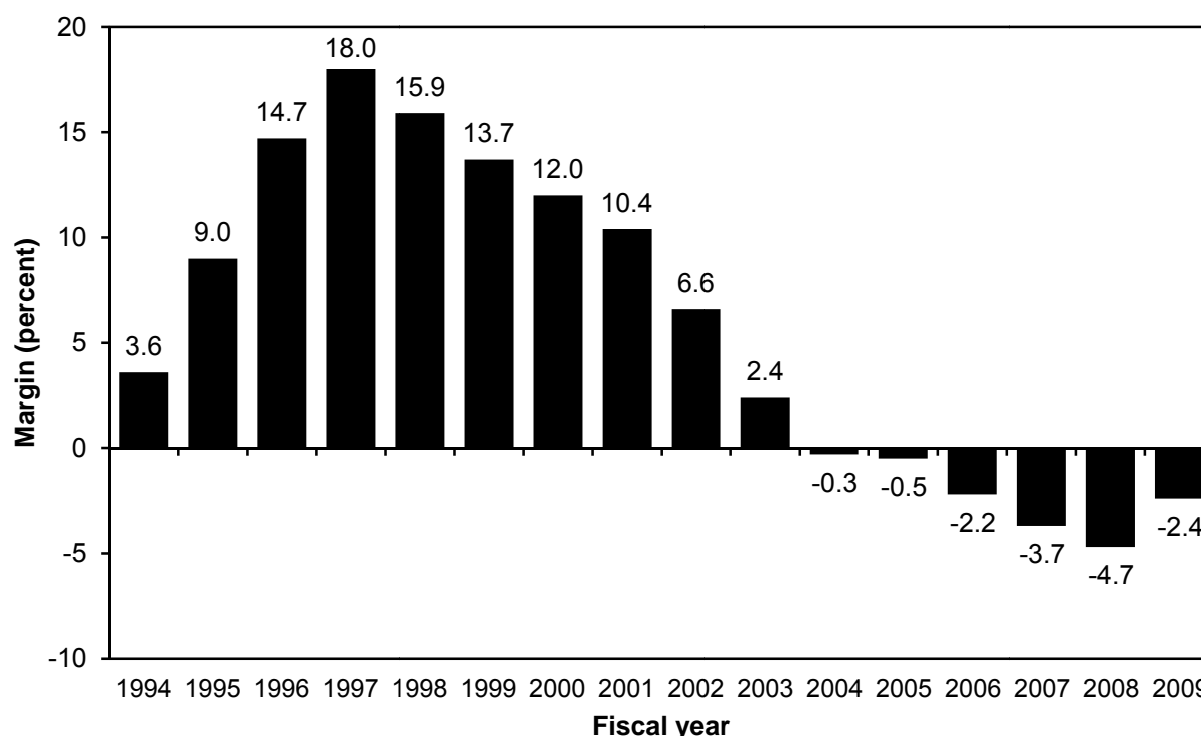
Note: IME (indirect medical education), DSH (disproportionate share). Analysis includes all hospitals covered by Medicare's acute inpatient prospective payment system (PPS). Includes both operating and capital payments but excludes direct graduate medical education payments. Simulated payments reflect 2009 payment rules applied to actual number of cases in 2009. Excludes critical access hospitals and their special payments. Sole community hospital and Medicare-dependent hospital categories include facilities paid at either the special nonfederal rate or the federal rate. Rows may not sum to 100 percent due to rounding.

*Payments received by sole community and Medicare-dependent hospitals beyond what would have been received under PPS. A few sole community hospitals are located in urban areas.

Source: MedPAC analysis of claims and impact file data from CMS.

- Medicare inpatient payments in 2009 to hospitals covered by the acute inpatient prospective payment system totaled more than \$110 billion. About \$99 billion (90 percent) was paid to hospitals located in urban areas and \$11.4 billion went to rural hospitals. This figure does not reflect more than \$2.7 billion in payments to critical access hospitals (CAHs) for inpatient care.
- Special payments—which include indirect medical education, disproportionate share, and outlier payments as well as additional payments to rural hospitals through the sole community hospital (SCH) and Medicare-dependent hospital (MDH) programs—account for 19 percent of all inpatient payments. This proportion is higher for urban (19.5 percent) than for rural hospitals (14.3 percent). This definition of special payments does not include wage index adjustments or CAHs' cost-based payments.
- The SCH and MDH categories above include hospitals paid at either the hospital-specific rate or the federal rate. Among the subgroup of SCHs and MDHs paid at the hospital-specific rate, the share of payments described as additional rural hospital payments was higher, 20.7 percent for SCHs and 11.4 percent for MDHs. Additional rural hospital payments increased in 2009 as a result of the rebasing of cost-based payment rates to a more current year.
- Outlier payments accounted for 3.6 percent of total inpatient payments in 2009. The legislative mandate for the level of outlier payments uses a different calculation, displaying outlier payments as a ratio of outlier payments to base payments plus outlier payments. Measured in this way, CMS's outlier share ratio was 5.3 percent in fiscal year 2009, close to the annual goal of 5.1 percent.

Chart 6-13. Medicare acute inpatient PPS margin, 1994–2009

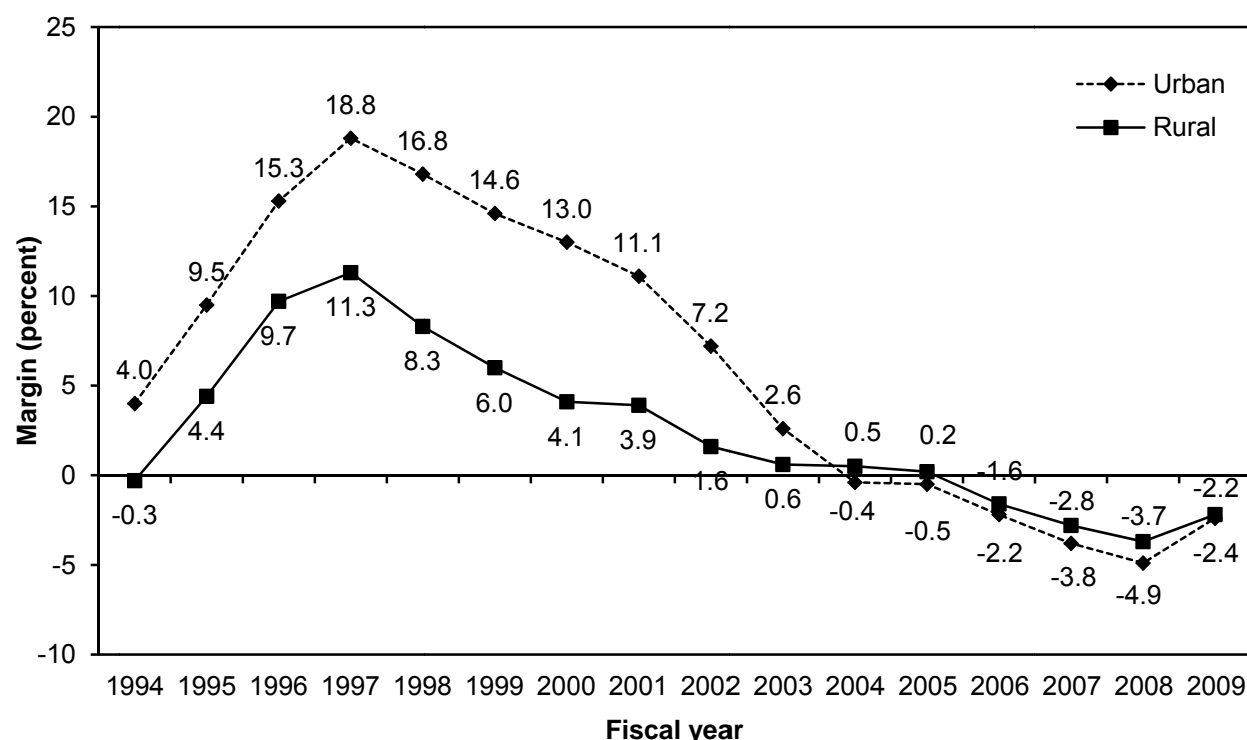


Note: PPS (prospective payment system). A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Medicare acute inpatient margin includes services covered by the acute care inpatient PPS.

Source: MedPAC analysis of Medicare cost report data (August 2010) from CMS.

- Medicare's acute inpatient margin reflects payments and costs for services covered by Medicare's inpatient hospital prospective payment system. The inpatient margin may be influenced by how hospitals allocate overhead costs across service lines. Only by combining data for all major services can we estimate Medicare costs without the potential influence of how overhead costs are allocated (see Chart 6-15).
- The Medicare inpatient margin reached a record high of 18.0 percent in 1997. After implementation of the Balanced Budget Act of 1997, however, inpatient margins declined over the next 10 years as costs rose faster than the 3 percent average annual increase in Medicare payments. In 2009, the margin was –2.4 percent, up more than 2 percentage points from 2008.
- Medicare inpatient margins vary widely. In 2009, one-quarter of hospitals had Medicare inpatient margins that were 7.9 percent or higher, and another quarter had inpatient margins that were –17.9 percent or lower. This range amounts to a 26 percentage point difference in performance between the top and bottom quartiles in 2009. Forty-two percent of hospitals had positive inpatient Medicare margins in 2009.

Chart 6-14. Medicare acute inpatient PPS margin, by urban and rural location, 1994–2009

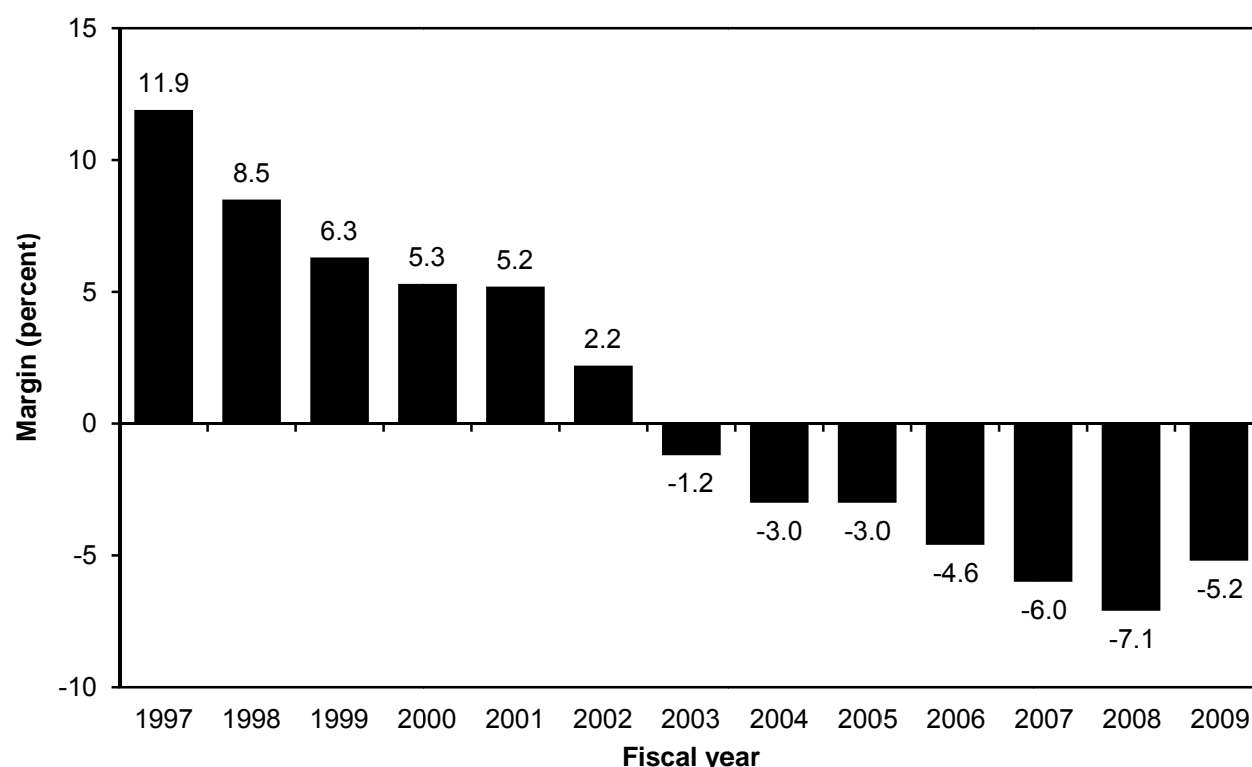


Note: PPS (prospective payment system). A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Medicare acute inpatient margin includes services covered by the acute care inpatient PPS.

Source: MedPAC analysis of Medicare cost report data (August 2010) from CMS.

- Urban hospitals historically had much higher Medicare inpatient margins than rural hospitals, but this difference narrowed earlier in this decade and today urban hospital margins are lower than those for rural hospitals.
- The gap between urban and rural hospitals' inpatient margins grew between 1994 and 2000. One factor in this divergence in this period is that urban hospitals had greater success in controlling cost growth, at least partly in response to pressures from managed care. From 2001 to 2004, the difference narrowed and from 2004 to 2008 rural hospitals' inpatient margins were slightly higher than those for urban hospitals. In 2009, the difference between the margins of rural and urban hospitals narrowed further, to –2.2 percent and –2.4 percent, respectively. The narrowing between these two groups of hospitals from 2001 to 2004 is the result of payment policies targeted at raising rural hospital payments and growth in the number of critical access hospitals, which removed many rural hospitals with low margins from the prospective payment system.

Chart 6-15. Overall Medicare margin, 1997–2009

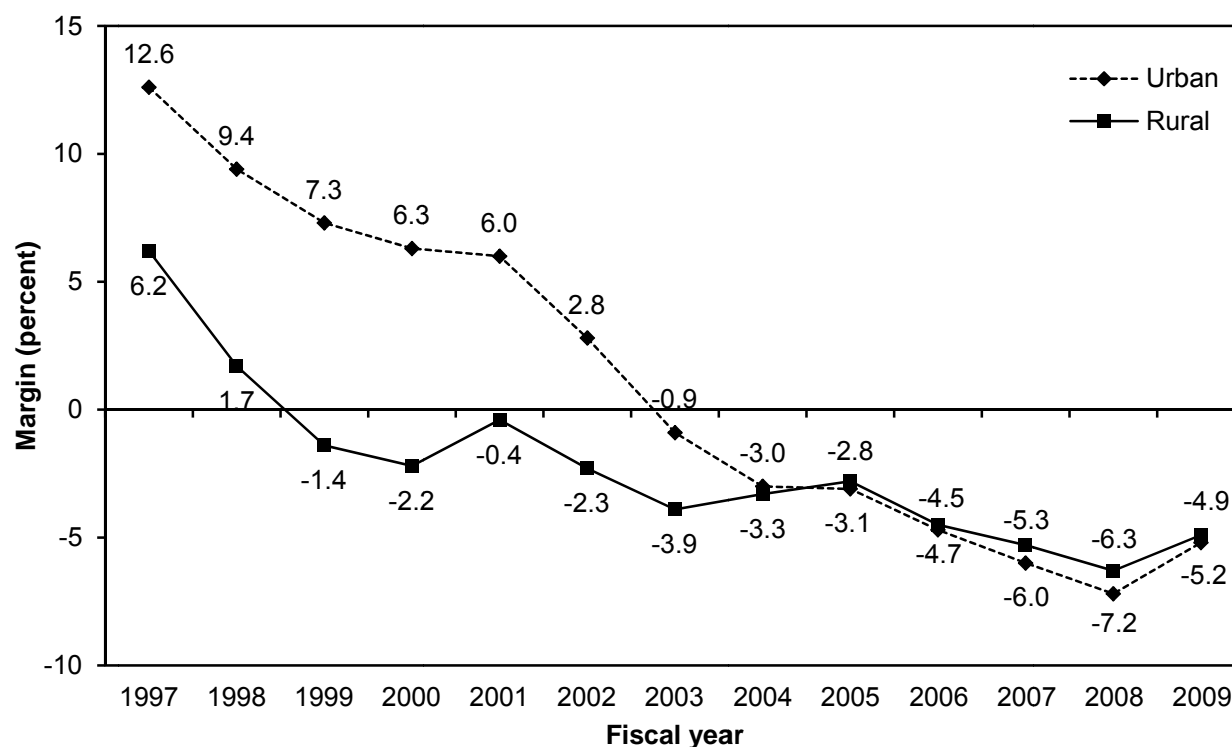


Note: A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Overall Medicare margins cover the costs and payments of acute inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing facility, and home health services as well as graduate medical education and bad debts. Data on overall Medicare margins before 1997 are unavailable.

Source: MedPAC analysis of Medicare cost report data (August 2010) from CMS.

- The overall Medicare margin incorporates payments and costs for acute inpatient, outpatient, skilled nursing, home health care, and inpatient psychiatric and rehabilitative services as well as direct graduate medical education and bad debts. The overall margin is available only since 1997, but it follows a trend similar to that for the inpatient margin.
- The overall Medicare margin in 1997 was 11.9 percent. In fiscal year 2009, it was –5.2 percent.
- In 2009, one-quarter of hospitals had overall Medicare margins of 4.2 percent or higher, and another quarter had margins of –17.3 percent or lower. Between 2000 and 2008, the difference in performance between the top and bottom quartile widened from 17 percentage points to 22 percentage points but narrowed to 21 percentage points in 2009. About 36 percent of hospitals had positive overall Medicare margins in 2009.

Chart 6-16. Overall Medicare margin, by urban and rural location, 1997–2009

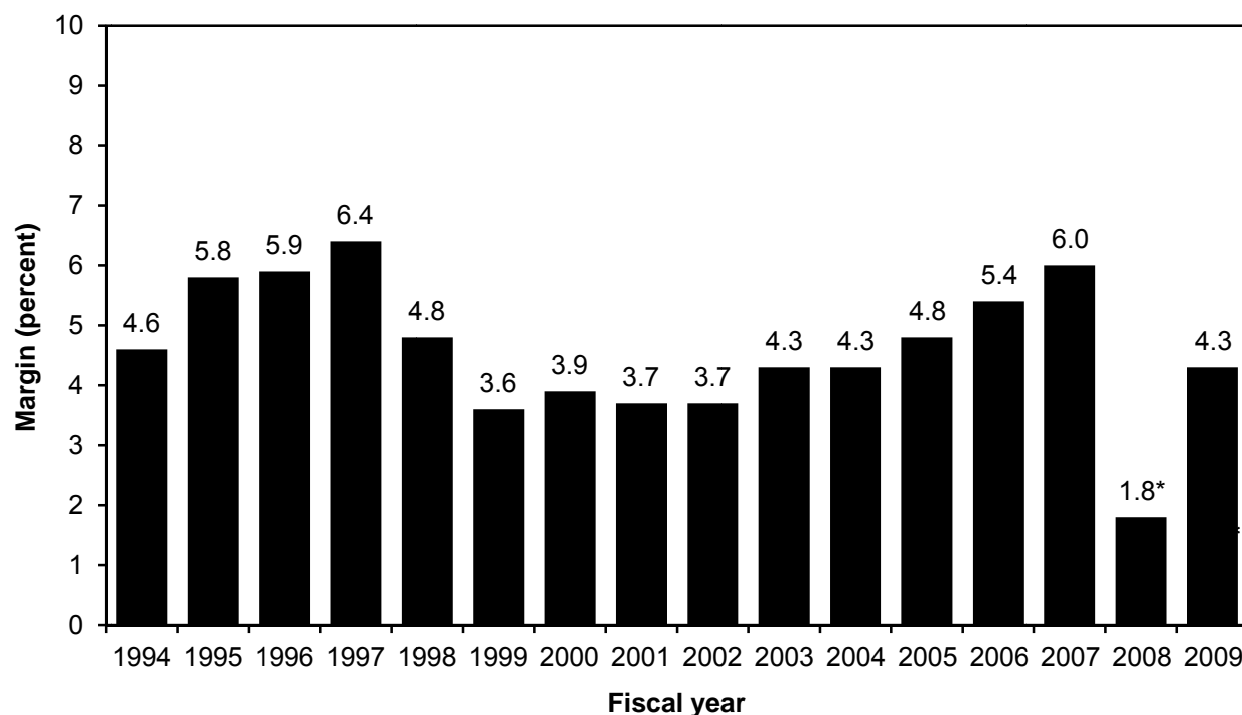


Note: A margin is calculated as revenue minus costs, divided by revenue. Data are based on Medicare-allowable costs and exclude critical access hospitals. Overall Medicare margins cover the costs and payments of acute hospital inpatient, outpatient, inpatient psychiatric and rehabilitation unit, skilled nursing facility, and home health services as well as direct graduate medical education and bad debts. Data on overall Medicare margins before 1997 are unavailable.

Source: MedPAC analysis of Medicare cost report data (August 2010) from CMS.

- As with inpatient margins, overall Medicare margins historically were higher for urban hospitals than for rural hospitals, but since 2005 overall Medicare margins for rural hospitals have gradually begun to slightly exceed those for urban hospitals.
- The difference in overall Medicare margins between urban and rural hospitals grew between 1997 and 2000 but has since narrowed. In 1997, the overall margin for urban hospitals was 12.6 percent, compared with 6.2 percent for rural hospitals. In 2009, the overall Medicare margin for urban hospitals was –5.2 percent, compared with –4.9 percent for rural hospitals. Policy changes made in the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 targeted to rural hospitals helped to improve the relative financial position of rural hospitals. Further legislation to assist rural hospitals was implemented after 2008.

Chart 6-17. Hospital total all-payer margin, 1994–2009



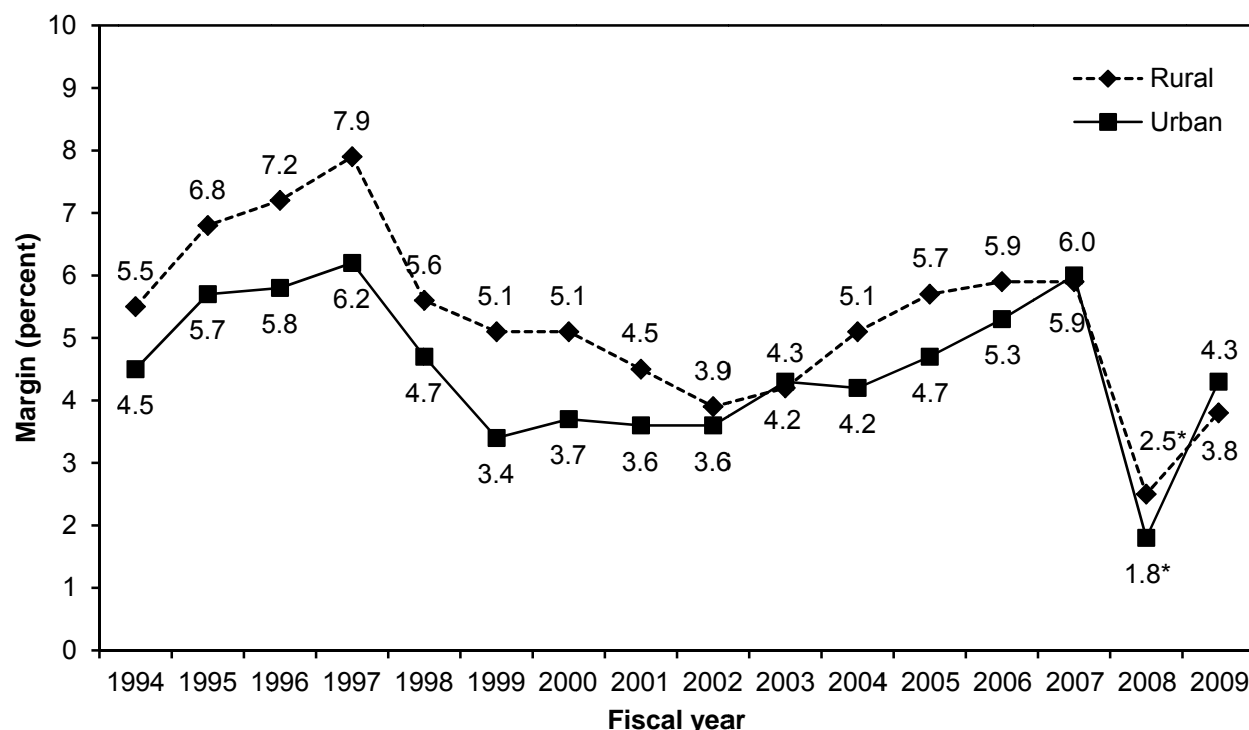
Note: A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. Analysis excludes critical access hospitals.

*The significant drop in total margin includes investment losses stemming from the decline of the U.S. stock market in 2008.

Source: MedPAC analysis of Medicare cost report data (August 2010) from CMS.

- The total hospital margin for all payers—Medicare, Medicaid, other government, and private payers—reflects the relationship of all hospital revenues to all hospital costs, including inpatient, outpatient, post-acute, and nonpatient services. The total margin also includes nonpatient revenue such as investment revenues. The 2008 decline of the U.S. stock market resulted in significant investment losses for hospitals, which resulted in a corresponding decline in total margin. Other types of margins we track, Medicare inpatient margin and overall Medicare margin, are operating margins that do not include investment revenue.
- The total hospital margin peaked in 1997 at 6.4 percent, before declining to less than 4 percent in the 1999–2002 period. From 2002 to 2007, total margins increased to the highest level in a decade. In 2008, the total margin declined to 1.8 percent, its lowest level since the inpatient prospective payment system was implemented. In 2009, total margin increased again to 4.3 percent.
- In 2009, 68 percent of hospitals had positive total margins. However, the total margin varied much less than the Medicare inpatient or overall Medicare margin. In 2009, one-quarter of prospective payment system hospitals had total margins that were 8.0 percent or higher, while another one-quarter had margins that were –1.7 percent or lower, a spread of roughly 10 percentage points compared with a 26 percentage point spread for Medicare inpatient margins and a 21 percentage point spread for overall Medicare margins.

Chart 6-18. Hospital total all-payer margin, by urban and rural location, 1994–2009



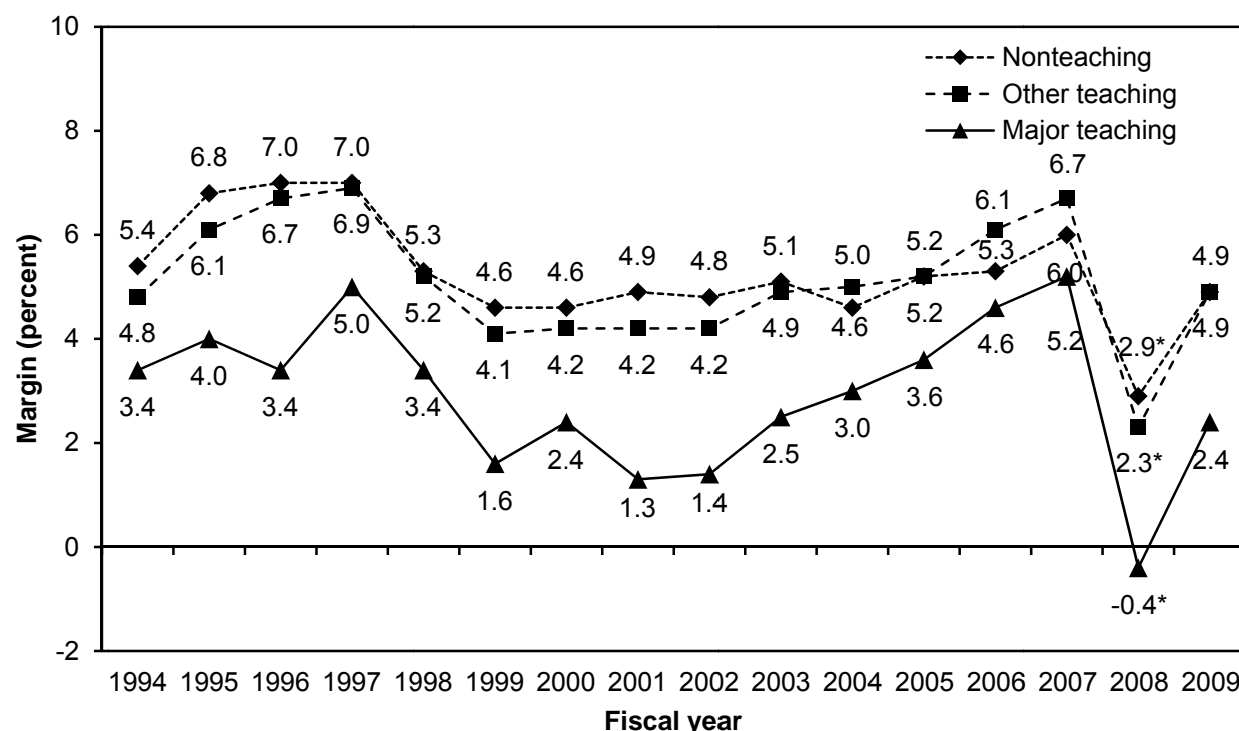
Note: A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue such as investment revenues. Analysis excludes critical access hospitals.

*Significant drop in total margin includes investment losses resulting from the U.S. stock market decline of 2008.

Source: MedPAC analysis of Medicare cost report data (August 2010) from CMS.

- In 2009, urban hospitals had higher total (all payer) margins than rural hospitals. Total margins were 4.3 percent for urban hospitals and 3.8 percent for rural hospitals. Historically, rural hospitals have usually had higher total margins in aggregate than urban hospitals. The fact that urban hospitals had higher total margins than rural hospitals in 2009 may be associated with urban hospitals' relatively larger investment portfolios and the improved performance of the U.S. stock market that year.
- In 2008, both rural and urban hospitals experienced their lowest level of total (all payer) margins in the last 15 years. Hospitals' total margin includes all patient care services funded by all payers, plus nonpatient revenue such as investment revenues. The 2008 decline of the U.S. stock market resulted in significant investment losses for hospitals, which resulted in a corresponding decline in total margins. Other types of margins we track, Medicare inpatient margin and overall Medicare margin, are operating margins that do not include investment revenue.

Chart 6-19. Hospital total all-payer margin, by teaching status, 1994–2009



Note: Major teaching hospitals are defined by a ratio of interns and residents to beds of 0.25 or greater, while other teaching hospitals have a ratio of greater than 0 and less than 0.25. A margin is calculated as revenue minus costs, divided by revenue. Total margin includes all patient care services funded by all payers, plus nonpatient revenue. Analysis excludes critical access hospitals.

*Significant drop in total margin includes investment losses resulting from the U.S. stock market decline of 2008.

Source: MedPAC analysis of Medicare cost report data (August 2010) from CMS.

- The pattern of total margins by teaching status is the opposite of the pattern for the Medicare inpatient and overall Medicare margins. The total margins for major teaching hospitals have consistently been lower than those for other teaching and nonteaching hospitals. In 2009, the total margin for major teaching hospitals stood at 2.4 percent compared with other teaching hospitals and nonteaching hospitals at 4.9 percent each.
- In 2007, major teaching hospitals' total (all payer) margins reached their highest level in more than two decades and increased for the fifth consecutive year. However, in 2008, this trend was interrupted by a steep decline in their investment revenues.
- The decline of the U.S. stock market in 2008 resulted in significant investment losses for hospitals, which resulted in a decline in hospitals' total margins. Other types of margins we track, Medicare inpatient margin and overall Medicare margin, are operating margins and do not include investment revenue.

Chart 6-20. Medicare margins by teaching and disproportionate share status, 2009

Hospital group	Share of hospitals	Share of Medicare inpatient payments	Medicare inpatient margin	Overall Medicare margin
All hospitals	100%	100%	-2.4%	-5.2%
Major teaching	9	25	6.7	-0.2
Other teaching	21	34	-3.0	-5.3
Nonteaching	69	42	-7.1	-7.8
Both IME and DSH	26	52	2.2	-2.4
IME only	5	6	-9.1	-10.3
DSH only	53	31	-3.7	-5.5
Neither IME nor DSH	16	10	-18.1	-15.3

Note: IME (indirect medical education), DSH (disproportionate share).

Source: MedPAC analysis of 2009 Medicare cost report data from CMS.

- Major teaching hospitals have the highest Medicare inpatient and overall Medicare margins. Their better financial performance is largely due to the additional payments they receive from the indirect medical education (IME) and disproportionate share (DSH) adjustments.
- Hospitals that receive neither IME nor DSH payments have the lowest Medicare margins. In 2009, the Medicare inpatient margins of these hospitals were nearly 25 percentage points below those of major teaching hospitals and overall Medicare margins were more than 15 percentage points lower.

Chart 6-21. Financial pressure leads to lower costs

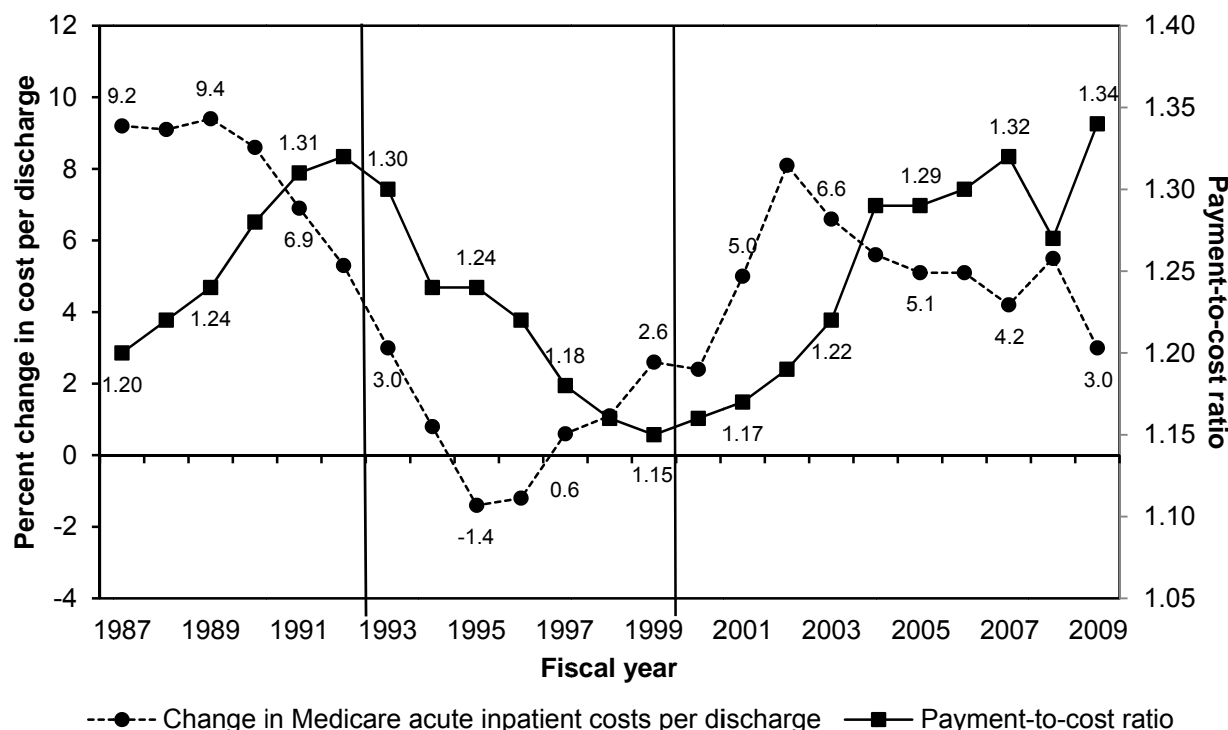
	Level of financial pressure, 2004–2008		
	High pressure (non-Medicare margin \leq 1%)	Medium pressure	Low pressure (non-Medicare margin > 5%)
Number of hospitals	756	390	1,747
Financial characteristics, 2009			
Non-Medicare margin (private, Medicaid, uninsured)	–3.8%	2.7%	10.7%
Standardized cost per discharge (as a share of the national median)			
Median of for profit and nonprofit	92	96	104
Nonprofit hospital	92	96	105
For-profit hospital	92	92	99
Annual growth in cost per discharge, 2006–2009	4.3%	4.2%	4.6%
Overall 2009 Medicare margin	4.7%	–1.1%	–10.2%
Patient characteristics (medians)			
Total hospital discharges in 2009	5,113	8,183	7,292
Medicare share of inpatient days	43%	42%	43%
Medicaid share of inpatient days	12	11	10
Medicare case mix index	1.33	1.45	1.45

Note: Standardized costs are adjusted for hospital case mix, wage index, outliers, transfer cases, interest expense, and the effect of teaching and low-income Medicare patients on hospital costs. The sample includes all hospitals that had complete cost reports on file with CMS by August 2010.

Source: MedPAC analysis of Medicare cost report and claims files from CMS.

- Higher financial pressure tends to lead to lower cost growth and lower costs per discharge. Hospitals with lower volume, lower case mix, and higher Medicaid charges are more likely to be under financial pressure.

Chart 6-22. Change in Medicare hospital inpatient costs per discharge and private payer payment-to-cost ratio, 1987–2009

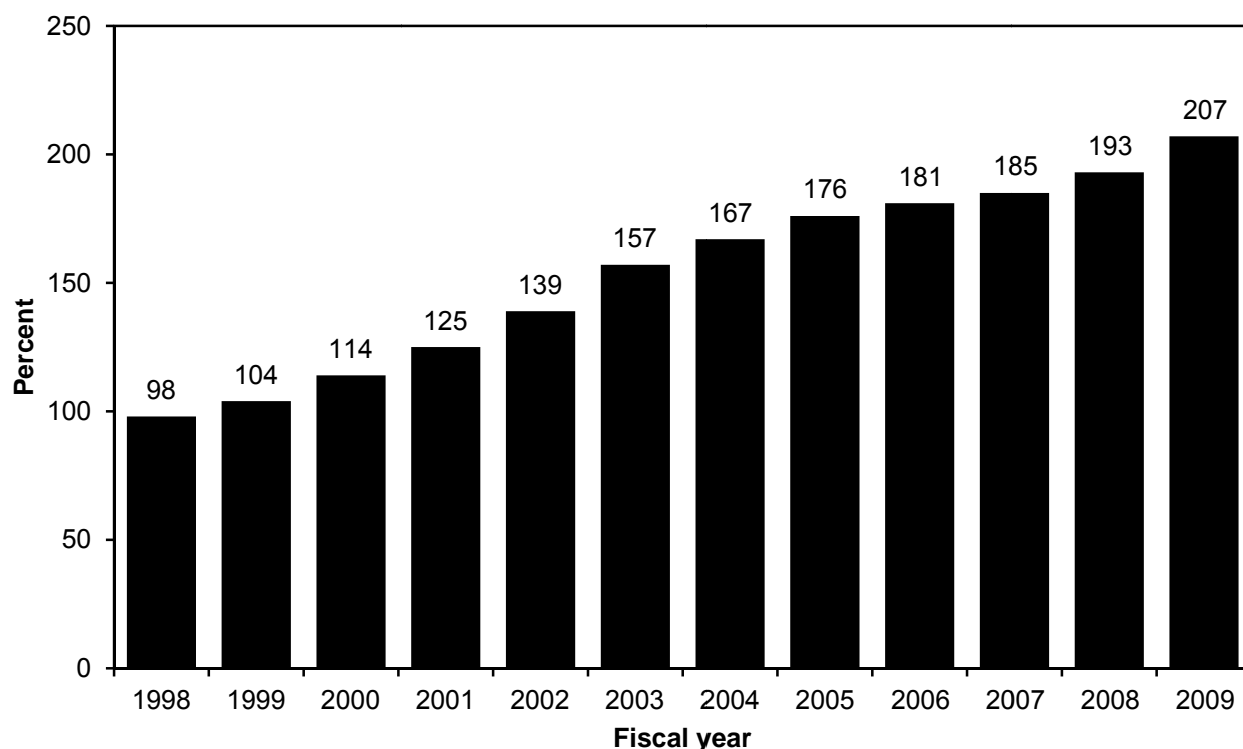


Note: Data are for community hospitals and cover all hospital services. Imputed values were used for missing data (about one-third of observations). Data for 2006–2009 exclude Medicare and Medicaid managed care patients from the private payment-to-cost ratio. The private payment-to-cost ratio includes self-pay patients. If we excluded self-pay patients, the payment-to-cost ratio for 2009 would be higher, at approximately 1.41.

Source: MedPAC analysis of Medicare Cost Report files from CMS and CMS's rules for the acute inpatient prospective payment system and American Hospital Association Annual Survey of Hospitals.

- The pattern of growth in Medicare costs per discharge makes it clear that hospitals have responded strongly to the incentives posed by the rise and fall of financial pressure from private payers over three distinct periods between 1987 and 2007.
- During the first period, 1987–1992, private payers' payments rose much faster than the cost of treating their patients (seen in the chart as a steep increase in the payment-to-cost ratio). This result suggests an almost complete lack of pressure from private payers. Medicare costs per discharge rose 8.3 percent per year during these years, more than 3 percentage points a year above the increase in Medicare's market basket index.
- As HMOs and other private insurers exerted more pressure during the second period, 1993–1999, the private payer payment-to-cost ratio dropped substantially. The rate of cost growth plummeted to an average of only 0.8 percent per year, which was more than 2 percentage points below the average increase in the market basket.
- As pressure from private payers waned after 1999, the private payer payment-to-cost ratio rose sharply, and hospital cost growth exceeded growth in the market basket by 2 percentage points a year. In 2005–2007, the growth in private payer profit margins slowed, and in 2007, cost growth more closely matches the market basket.
- In 2009, the private payer payment-to-cost ratio increased as cost growth was lower than payment rate increases. The slow cost growth in 2009 may reflect financial pressure stemming from 2008 investment portfolio losses and economic uncertainty. (See Chart 6-17.)

Chart 6-23. Markup of charges over costs for Medicare services, 1998–2009

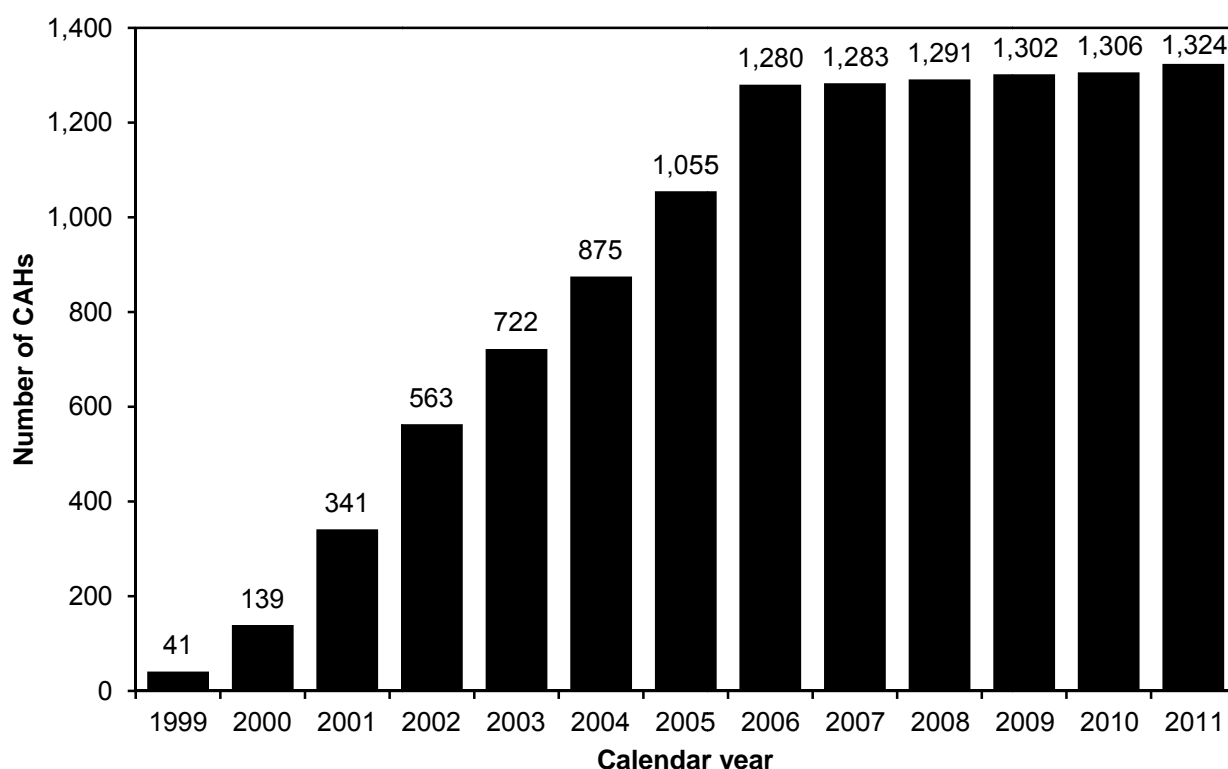


Note: Analysis includes all community hospitals.

Source: American Hospital Association Annual Survey of Hospitals.

- The markup of charges over costs rose from about 98 percent in 1998 to 207 percent in 2009. Charges now exceed costs by more than a factor of 3.
- Since few patients pay full charges, rapid growth in charges may have little impact on hospital financial performance. However, this growth may significantly affect uninsured patients, who may pay full charges. More rapid growth in charges (relative to growth in costs) may reflect hospitals' attempts to maximize revenue from private payers (who often structure their payments as a discount off charges). The unusually large increases in charges in 2002 and 2003 may have resulted from some hospitals manipulating Medicare outlier payments. Toward the end of fiscal year 2003, Medicare revised its outlier policy in an attempt to curb hospitals' opportunity to increase their outlier payments through excessive increases in charges.
- The markup of charges over costs is generally higher for urban hospitals (224 percent in 2009) than for rural hospitals (168 percent in 2009).

Chart 6-24. Number of CAHs, 1999–2011

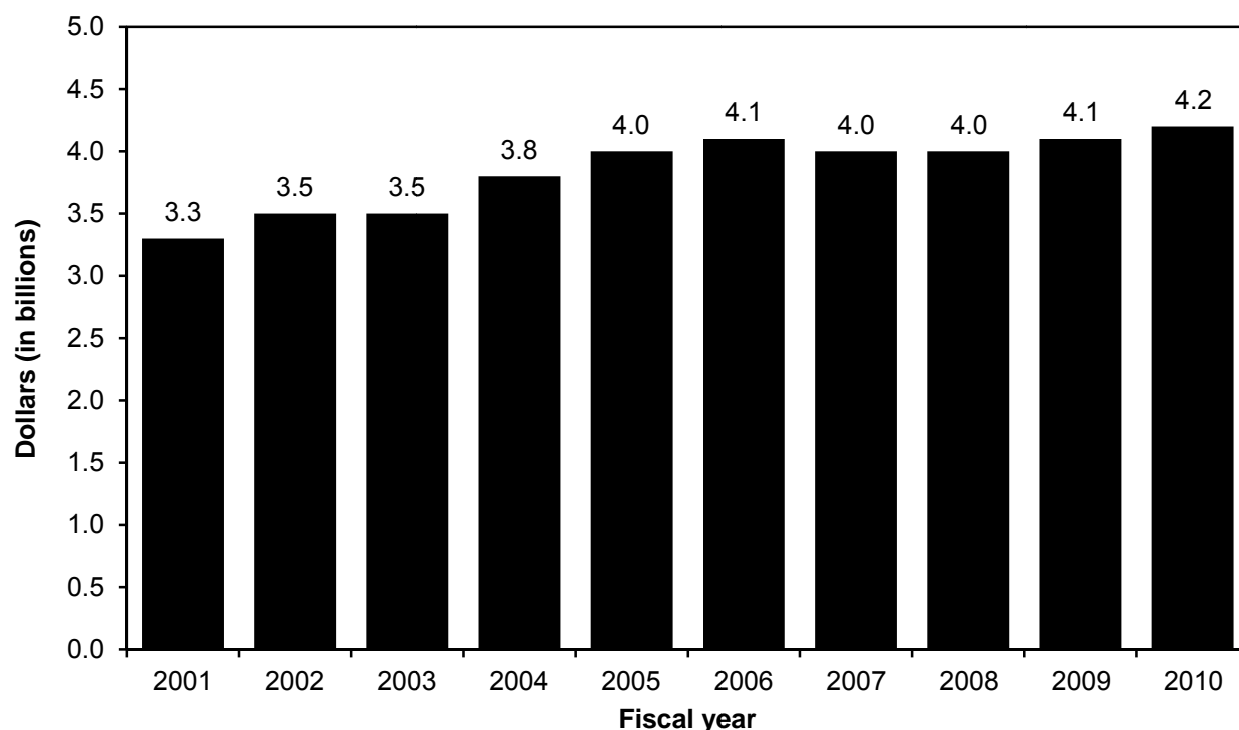


Note: CAH (critical access hospital).

Source: The Medicare Rural Hospital Flexibility Program and CMS.

- The number of critical access hospitals (CAHs) grew rapidly from 1999 to 2006 but has since leveled off at approximately 1,300 facilities.
- The increase in CAHs is in part due to a series of legislative changes that made conversion to CAH status easier and expanded the services that qualify for cost-based reimbursement. Currently, CAHs are paid their Medicare costs plus 1 percent for inpatient services, outpatient services (including laboratory and therapy services), and post-acute services in swing beds.
- Before 2006, a hospital could convert to CAH status if it was (1) 35 miles by primary road or 15 miles by secondary road from the nearest hospital, or (2) the state waived the distance requirement by declaring the hospital a “necessary provider.” Starting in 2006, states could no longer waive the distance requirement. While most existing CAHs fail the distance test, they are grandfathered into the program. Among small rural hospitals that have not converted, most would not meet the distance requirement. Therefore, we expect the number of CAHs to remain fairly constant.

Chart 6-25. Medicare payments to inpatient psychiatric facilities, 2001–2010



Source: CMS, Office of the Actuary.

- The inpatient psychiatric facility prospective payment system started January 1, 2005.
- Medicare program spending for beneficiaries' care in inpatient psychiatric facilities grew an estimated 2.7 percent per year between 2001 and 2010.
- Inpatient psychiatric care furnished in scatter beds in acute care hospitals and paid under the acute care inpatient prospective payment system is not included in this chart.

Chart 6-26. Number of inpatient psychiatric facility cases has fallen under the PPS, 2002–2009

	TEFRA		PPS			Average annual change 2002–2004	Average annual change 2004–2009
	2002	2004	2006	2008	2009		
Cases	464,780	483,271	474,417	442,759	431,276	2.0%	–2.3%
Cases per 1,000 FFS beneficiaries	13.3	13.2	13.1	12.5	12.3	–0.2	–1.5
Spending per FFS beneficiary	\$90.6	\$96.8	\$104.7	\$109.5	\$111.3	3.4	2.8
Payment per case	\$6,822	\$7,328	\$7,989	\$8,742	\$9,080	3.6	4.4
Payment per day	\$570	\$627	\$677	\$728	\$763	4.9	4.0
Length of stay (in days)	13.0	12.7	13.0	13.1	13.1	–1.2	0.6

Note: PPS (prospective payment system), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), fee-for-service (FFS). Numbers of cases and patients reflect Medicare FFS utilization of services furnished in inpatient psychiatric facilities. Scatter bed cases and spending are excluded, as are cases and spending for beneficiaries enrolled in Medicare Advantage plans.

Source: MedPAC analysis of MedPAR data from CMS.

- Since a prospective payment system for inpatient psychiatric facilities (IPFs) was implemented in January 2005, the number of cases in IPFs has fallen, on average, about 2.3 percent per year. Controlling for the number of beneficiaries enrolled in fee-for-service Medicare, IPF cases fell 1.5 percent per year between 2004 and 2009.

Chart 6-27. Inpatient psychiatric facilities, 2003–2009

Type of IPF	TEFRA		PPS					Annual change 2003–2004	Average annual change 2004–2009
	2003	2004	2005	2006	2007	2008	2009		
All	1,703	1,657	1,623	1,590	1,584	1,564	1,536	–2.7%	–1.5%
Urban	1,298	1,277	1,283	1,267	1,262	1,251	1,210	–1.6	–1.1
Rural	405	378	340	323	322	313	326	–6.7	–2.9
Freestanding	353	352	366	396	412	420	426	–0.3	3.9
Hospital-based units	1,350	1,305	1,257	1,194	1,172	1,144	1,110	–3.3	–3.2
Nonprofit	974	949	910	878	849	831	802	–2.6	–3.3
For profit	349	327	344	343	359	352	368	–6.3	2.4
Government	380	381	369	369	376	381	366	0.3	–0.8

Note: IPF (inpatient psychiatric facility), TEFRA (Tax Equity and Fiscal Responsibility Act of 1982), PPS (prospective payment system). Numbers are facilities that submitted valid Medicare cost reports in the given fiscal year.

Source: MedPAC analysis of Medicare cost report files from CMS.

- Between 2003 and 2004, the number of freestanding inpatient psychiatric facilities (IPFs) remained fairly steady. Beginning in 2005, when the IPF prospective payment system (PPS) began to be implemented, the number of freestanding IPFs grew an average of 3.9 percent per year. By comparison, the number of distinct-part psychiatric units in acute care hospitals fell by 3.3 percent between 2003 and 2004, a decline that continued after the PPS was implemented. Much of the decline in psychiatric units occurred among nonprofit and rural facilities.
- The drop in the number of psychiatric units likely has several causes. Psychiatric units may not be as profitable as they once were, particularly when compared with other acute care hospital services. Other factors, such as the availability of psychiatrists to provide on-call services in hospital emergency departments, may also affect acute care hospitals' decisions to close their psychiatric units.

Chart 6-28. One diagnosis accounted for almost three-quarters of IPF cases in 2009

MS-DRG	Diagnoses	Percentage
885	Psychosis	73.1%
057	Degenerative nervous system disorders without MCC	7.5
884	Organic disturbances & mental retardation	5.8
897	Alcohol/drug abuse or dependency, no rehabilitation, without MCC	4.2
881	Depressive neurosis	3.3
882	Neurosis except depressive	1.1
895	Alcohol/drug abuse or dependency with rehabilitation, without MCC	0.9
056	Degenerative nervous system disorders with MCC	0.8
880	Acute adjustment reaction & psychosocial dysfunction	0.7
886	Behavioral and developmental disorders	0.5
883	Disorders of personality & impulse control	0.5
894	Alcohol/drug use—left AMA	0.2
896	Alcohol/drug abuse or dependency without rehabilitation, with MCC	0.2
876	OR procedure with principal diagnosis of mental illness	0.1
887	Other mental disorders	0.1
081	Nontraumatic stupor & coma without MCC	0.1
080	Nontraumatic stupor & coma with MCC	0.0
	Nonpsychiatric MS-DRGs	0.9
	Total	100.0

Note: IPF (inpatient psychiatric facility), MS-DRG (Medicare severity–diagnosis related group), MCC (major comorbidity or complication), AMA (against medical advice), OR (operating room).

Source: MedPAC analysis of MedPAR data from CMS.

- Medicare patients in inpatient psychiatric facilities (IPFs) are generally assigned to 1 of 17 psychiatric Medicare severity–diagnosis related groups. In 2009, the most frequently occurring IPF diagnosis—accounting for 73 percent of IPF discharges—was psychoses. The next most common discharge, accounting for almost 8 percent of IPF cases, was degenerative nervous system disorders.

Chart 6-29. IPF discharges by beneficiary characteristics, 2009

Characteristic	Share of total IPF discharges
Current eligibility status*	
Aged	34.9%
Disabled	65.0
ESRD only	0.1
Age (years)	
<45	28.3
45–64	36.4
65–79	21.1
80+	14.6
Race	
White	77.1
African American	17.3
Hispanic	2.7
Other	2.9

Note: IPF (inpatient psychiatric facility), ESRD (end-stage renal disease).

*Some aged beneficiaries are also disabled.

Source: MedPAC analysis of MedPAR data from CMS.

- Most Medicare beneficiaries treated in inpatient psychiatric facilities (IPFs) qualify for Medicare because of a disability. As a result, IPF patients tend to be younger and poorer than the typical fee-for-service beneficiary.
- Diagnosis patterns differed by age and race. Among the top Medicare severity–diagnosis related groups in 2009, degenerative nervous system disorders, such as dementia, were much more common in older patients, while psychoses were more common in younger patients.
- A majority of beneficiaries admitted to IPFs are dually eligible for Medicare and Medicaid. In 2009, 59 percent of Medicare beneficiaries with at least one IPF discharge were dually eligible for at least one month of the year.

Web links. Acute inpatient services

Short-term hospitals

- Chapter 3 of the MedPAC March 2011 Report to the Congress provides additional detailed information on hospital margins.

http://medpac.gov/chapters/Mar11_Ch03.pdf

- MedPAC provides basic information about the acute inpatient prospective payment system in its Payment Basics series.

http://www.medpac.gov/documents/MedPAC_Payment_Basics_10_hospital.pdf

- CMS provides information on the hospital market basket.

<http://www.cms.gov/MedicareProgramRatesStats/downloads/info.pdf>

- CMS published the proposed acute inpatient prospective payment system rule in the May 4, 2010, *Federal Register*.

<http://www.cms.gov/AcuteInpatientPPS/IPPS2011/list.asp#TopOfPage>

Inpatient psychiatric facilities

- Chapter 6 of the MedPAC June 2010 Report to the Congress provides information on inpatient psychiatric facilities.

http://medpac.gov/chapters/Jun10_Ch06.pdf

- MedPAC provides basic information about the inpatient psychiatric facility prospective payment system in its Payment Basics series.

http://www.medpac.gov/documents/MedPAC_Payment_Basics_10_psych.pdf

- CMS provides information on the inpatient psychiatric facility prospective payment system.

<http://www.cms.gov/InpatientPsychFacilPPS/>

- CMS describes updates to the inpatient psychiatric facility prospective payment system for the rate year beginning July 1, 2011, in the January 27, 2011, *Federal Register*.

<http://edocket.access.gpo.gov/2011/pdf/2011-1507.pdf>